

Matthew W. Gissendanner  
Senior Counsel  
Dominion Energy Services, Inc.

220 Operation Way, MC C222, Cayce, SC 29033  
DominionEnergy.com



June 14, 2021

**VIA ELECTRONIC FILING**

Jerisha Dukes, Esquire  
**Public Service Commission of South Carolina**  
101 Executive Center Drive  
Columbia, South Carolina 29210

RE: Michael Hochgraf v. Dominion Energy South Carolina, Inc.  
Docket No. 2021-165-E

Dear Ms. Dukes:

Enclosed for filing on behalf of Dominion Energy South Carolina, Inc. ("DESC") in the above-captioned docket is the direct testimony, exhibits, and verifications of Kimberly Eads and Richard Gilbert.

By copy of this letter, we are serving the parties of record with a copy of DESC's direct testimony, exhibits, and verifications and attach a certificate of service to that effect.

If you have any questions or need additional information, please do not hesitate to contact us.

Very truly yours,

A handwritten signature in blue ink that reads "Matthew W. Gissendanner".

Matthew W. Gissendanner

MWG/kms  
Enclosures

cc: Mr. Michael Hochgraf  
Alexander W. Knowles, Esquire  
(both via electronic mail and U.S. First Class Mail w/ enclosure)

**DIRECT TESTIMONY OF**

**KIMBERLY EADS**

**ON BEHALF OF**

**DOMINION ENERGY SOUTH CAROLINA, INC.**

**DOCKET NO. 2021-165-E**

**Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND  
CURRENT POSITION.**

A. My name is Kimberly Eads. My business address is 2390 West Aviation Avenue, North Charleston, South Carolina 29406. I am employed by Dominion Energy South Carolina, Inc. ("DESC" or the "Company") as a Consulting Engineer for the Power Quality Department.

**Q. DESCRIBE YOUR EDUCATIONAL BACKGROUND AND  
BUSINESS EXPERIENCE.**

A. I graduated from the University of South Carolina ("USC") in May 1986 with a Bachelor of Science Degree in Electrical Engineering and in August 1993 with a Master of Business Administration.

Upon graduation, I joined South Carolina Electric & Gas Company, now DESC, as an engineer. Over the last 35 years, I have held several engineering positions within the Company in various departments

1 including Customer Service Engineering, Electric Operations, and Power  
2 Quality Engineering. I have been in my present position for over 20 years.

3 I am a registered Professional Engineer in the State of South  
4 Carolina.

5  
6 **Q. PLEASE BRIEFLY SUMMARIZE YOUR DUTIES WITH DESC.**

7 A. I am responsible for providing technical support to account managers  
8 and electric operations personnel when the need arises to investigate and/or  
9 monitor the electric supply voltage for a customer or location, analyze the  
10 results of any monitoring to determine the presence and nature of any  
11 supply problems, and make recommendations as appropriate.

12  
13 **Q. HAVE YOU PREVIOUSLY PRESENTED TESTIMONY BEFORE**  
14 **THE PUBLIC SERVICE COMMISSION OF SOUTH CAROLINA**  
15 **(“COMMISSION”)?**

16 A. No.

17  
18 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS**  
19 **PROCEEDING?**

20 A. The purpose of my testimony is to respond to the Complaint of Mr.  
21 Michael Hochgraf dated May 18, 2021.

22

1   **Q.   PLEASE BRIEFLY SUMMARIZE YOUR INVOLVEMENT IN THIS**  
2   **MATTER.**

3   A.           Prior to the filing of his Complaint, in October 2020, I visited Mr.  
4   Hochgraf's residence at 3144 Cross Vine Lane in Summerville, South  
5   Carolina, to install a monitor to record the voltage at Mr. Hochgraf's  
6   residence for two weeks from October 20, 2020, to November 2, 2020. The  
7   one-minute average of the voltage recordings for the two-week period are  
8   attached hereto as Exhibit No. \_\_ (KE-1).

9  
10   **Q.   WHAT DID YOUR ANALYSIS OF THE RECORDINGS OVER THIS**  
11   **TWO-WEEK PERIOD REVEAL?**

12   A.           My analysis of the recordings determined that the power being  
13   delivered power to Mr. Hochgraf's residence was "within specs." The  
14   Company communicated this information to Mr. Hochgraf.

15  
16   **Q.   WHAT DO YOU MEAN WHEN YOU SAY THAT THE DELIVERED**  
17   **POWER TO MR. HOCHGRAF'S RESIDENCE WAS "WITHIN**  
18   **SPECS"?**

19   A.           In this case, the term "within specs" means that the power delivered  
20   to Mr. Hochgraf's residence complied with Commission Regulation 103-363  
21   during the monitoring period. Specifically, that Regulation requires that  
22   variations in the Company's steady state voltage "should not exceed 10%

1 above or below the standard average voltage.” The Company’s standard  
2 average voltage for a typical residential customer is 120 volts. During the  
3 monitoring period, the Company’s steady state voltage was within 10% of  
4 the standard average voltage at all times.

5  
6 **Q. IN YOUR COMMUNICATIONS WITH MR. HOCHGRAF, DID YOU**  
7 **AT ANY TIME INDICATE TO HIM THAT THE TRIPPING OF HIS**  
8 **BREAKERS DURING A POWER OUTAGE WAS “NOT NORMAL” ?**

9 A. No. Ground Fault Circuit Interrupter (“GFCI”) breakers are  
10 designed to trip anytime they sense a 5 milliamp (“mA”) differential  
11 between the current going to a load and the current returning on the  
12 neutral. GFCI breakers are permitted to trip on a differential as low as 4  
13 mA and must trip at a differential of 6mA or more. The current differential  
14 indicates current returning via a ground path. Some appliances have  
15 devices in their circuitry that shunt some current to ground when they  
16 sense a quick change in the input voltage. This can cause GFCI breakers  
17 to trip when there is not a true ground fault. Arc Fault Circuit Interrupter  
18 (“AFCI”) breakers have circuitry that is designed to trip when it detects a  
19 change in the voltage waveform that resembles arcing due to a fault. This  
20 detection is not infallible at this time and can trip on arcing that is not  
21 related to a fault in the circuit. AFCIs can trip on arcs that are generated  
22 by the appliances themselves and on electromagnetic interference

1 generated by the appliances that can disrupt the proper operation of the  
2 AFCI circuitry.

3  
4 **Q. WERE ANY OUTAGES OBSERVED DURING THE TWO-WEEK**  
5 **RECORDING PERIOD?**

6 A. No.

7  
8 **Q. IS MR. HOCHGRAF CORRECT THAT RECORDING OF OUTAGE**  
9 **DATA IS “RELEVANT DATA” THAT NEEDS TO BE “ANALYZED”**  
10 **BEFORE REACHING THE CONCLUSION THAT THERE IS NOT A**  
11 **POWER SUPPLY PROBLEM TO HIS RESIDENCE?**

12 A. No. Voltage was measured for a sufficient length of time to  
13 determine that there is not a power supply problem to his house. AFCI and  
14 GFCI nuisance trips are a known issue that have not been resolved by the  
15 various appliance or breaker manufacturers at this time. In fact, the  
16 National Electrical Code (“NEC”) has made exceptions in the past for GFIs  
17 for refrigerators in kitchens. See page 68 of the 2014 NEC Handbook. The  
18 2017 NEC modified this exception and limited it to exempting GFI  
19 receptacles for refrigerators that are over 6 feet from a sink. See page 70 of  
20 the 2017 NEC Handbook. AFCI requirements have been expanding in  
21 recent editions of the NEC as well and now no longer exempt garage  
22 receptacles.

1   **Q.   AS A PROFESSIONAL ENGINEER AND BASED ON YOUR**  
2       **ANALYSIS OF THE RECORDINGS, IS THERE A POWER SUPPLY**  
3       **PROBLEM TO MR. HOCHGRAF'S RESIDENCE?**

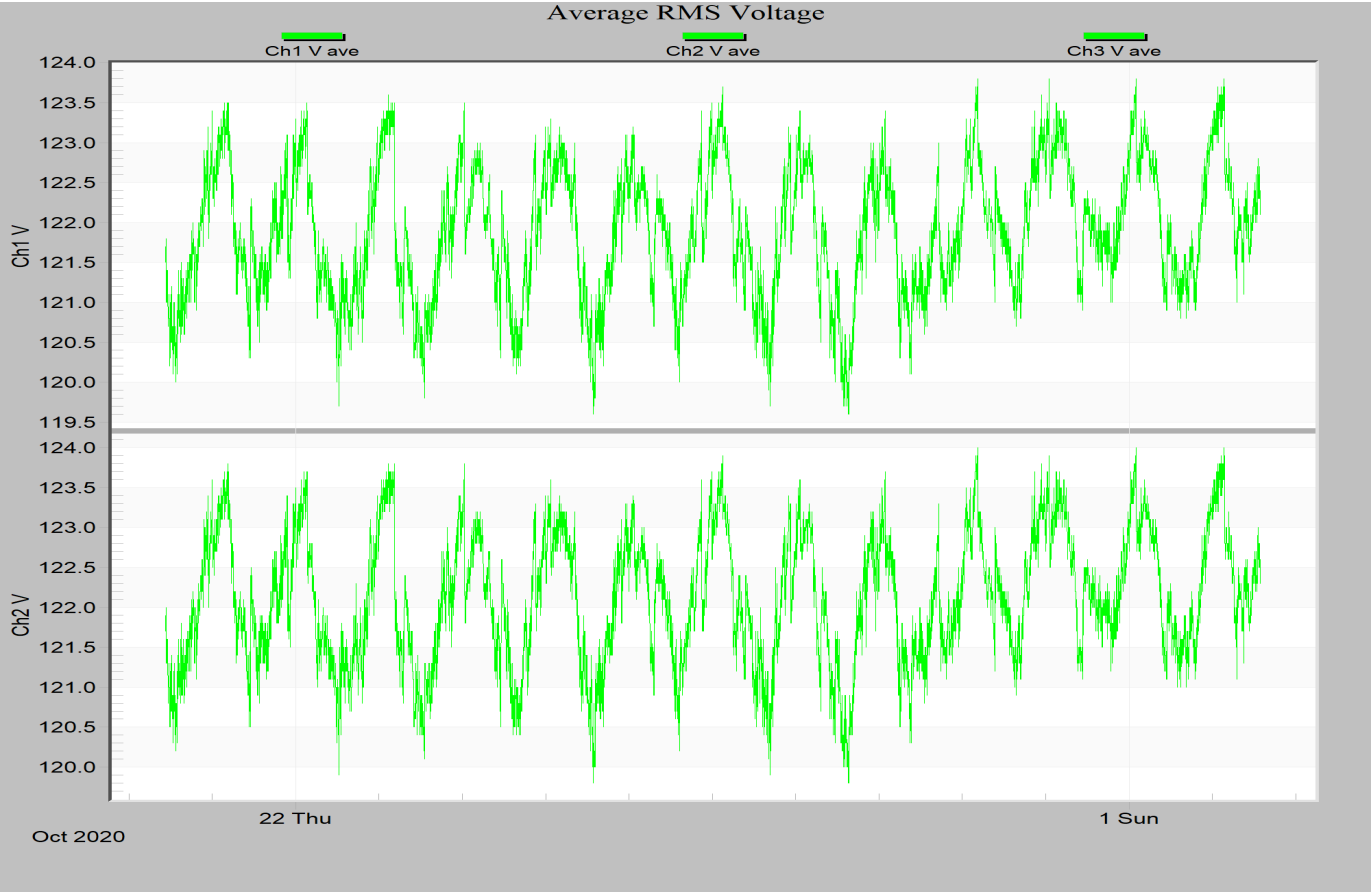
4   A.       No. The Company is providing Mr. Hochgraf with safe and reliable  
5       electric service that is within specifications.

6

7   **Q.   DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

8   A.       Yes.

Exhibit No. \_\_ (KE-1). Recording of Average RMS Voltage at 3144 Cross Vine Lane from October 20, 2020, to November 2, 2020





**BEFORE**  
**THE PUBLIC SERVICE COMMISSION OF**  
**SOUTH CAROLINA**  
**DOCKET NO. 2021-165-E**

**IN RE:**

Michael Hochgraf,

Complainant/Petitioner,

v.

Dominion Energy South Carolina, Inc.

Defendant/Respondent.

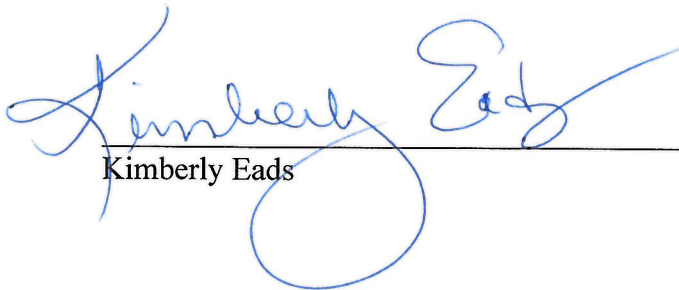
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**VERIFICATION**

I, Kimberly Eads, first being duly sworn, depose and say that:

1. I am employed by Dominion Energy South Carolina, Inc. as a Consulting Engineer for the Power Quality Department.
2. I have prepared or caused to be prepared under my supervision direct testimony and one exhibit, where were pre-filed with the Public Service Commission of South Carolina in Docket No. 2021-165-E on June 14, 2021.
3. I have read said pre-filed direct testimony and reviewed the exhibit and know the contents thereof, and the contents of said pre-filed direct testimony and exhibit are true.

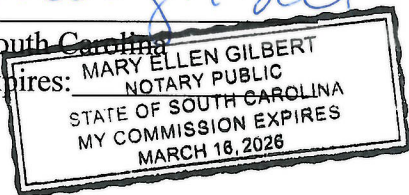
FURTHER AFFIANT SAYETH NOT.

  
\_\_\_\_\_  
Kimberly Eads

Sworn to and subscribed before me  
this 7 th day of June, 2021



Notary Public for South Carolina  
My Commission Expires:



**DIRECT TESTIMONY OF**

**RICHARD A. GILBERT II**

**ON BEHALF OF**

**DOMINION ENERGY SOUTH CAROLINA, INC.**

**DOCKET NO. 2021-165-E**

**Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND  
CURRENT POSITION.**

A. My name is Richard A. Gilbert II. My business address is 129 Spaniel Lane, Summerville, South Carolina 29483. I am employed by Dominion Energy South Carolina, Inc. ("DESC" or the "Company") as Manager of Electric Distribution Operations & Construction for the Summerville District.

**Q. DESCRIBE YOUR EDUCATIONAL BACKGROUND AND  
BUSINESS EXPERIENCE.**

A. I graduated from Trident Technical College in 1985 with an Associate's Degree in Engineering Technology.

Prior to that, I joined South Carolina Electric & Gas Company, now DESC, as a meter reader/collector in 1976. Over the last 45 years, I have held numerous positions within the Company, including Distribution

1 Technician, Associate Manager and Local Manager. My title was changed  
2 to match my current job responsibilities in January of this year.

3

4 **Q. PLEASE BRIEFLY SUMMARIZE YOUR DUTIES WITH DESC.**

5 A. I am responsible for the construction, operation, and maintenance of  
6 the Electrical Distribution System providing electric power to the Low  
7 Country District in the areas around Summerville, North Charleston,  
8 Ladson, Ridgeville, and Dorchester.

9

10 **Q. HAVE YOU PREVIOUSLY PRESENTED TESTIMONY BEFORE**  
11 **THE PUBLIC SERVICE COMMISSION OF SOUTH CAROLINA**  
12 **(“COMMISSION”)?**

13 A. No.

14

15 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS**  
16 **PROCEEDING?**

17 A. The purpose of my testimony is to respond to the Complaint of Mr.  
18 Michael Hochgraf dated May 18, 2021.

19

20

21

1 **Q. PLEASE BRIEFLY SUMMARIZE YOUR INVOLVEMENT IN THIS**  
2 **MATTER.**

3 A. Prior to the filing on his Complaint, I have communicated with Mr.  
4 Hochgraf on multiple occasions regarding the subject matter of his  
5 complaint, usually via phone conversation. In October 2020, I also visited  
6 Mr. Hochgraf's residence at 3144 Cross Vine Lane in Summerville, South  
7 Carolina, with Kimberly Eads to install a monitor to record the voltage at  
8 Mr. Hochgraf's residence for two weeks from October 20, 2020, to November  
9 2, 2020. The analysis of those recordings is discussed in the direct  
10 testimony of Company Witness Kimberly Eads.  
11

12 **Q. IS DESC PROVIDING SAFE AND RELIABLE SERVICE TO MR.**  
13 **HOCHGRAF'S RESIDENCE?**

14 A. Yes. Exhibit No. \_\_ (RAG-1), attached hereto, displays the four  
15 different measures of service reliability. The first reliability measure is  
16 System Average Interruption Duration Index ("SAIDI"), which is the  
17 average total minutes of outage time for a customer in a year. SAIDI is the  
18 most commonly used reliability measure. The second reliability measure is  
19 System Average Interruption Frequency Index ("SAIFI"), which is the  
20 average number of sustained interruptions for a customer in a year. The  
21 third reliability measure is Customer Average Interruption Duration Index  
22 ("CAIDI"), which is a measure of the average sustained duration in minutes

1 of a customer experiencing a sustained outage. These first three (3)  
2 measures are related. Multiplying SAIFI by CAIDI approximates SAIDI.  
3 The fourth reliability measure is Momentary Average Interruption  
4 Frequency Index ("MAIFI"), which is the average number of momentary  
5 interruptions (i.e., an interruption equal to or less than five minutes) a  
6 customer on our system experiences in a year.

7 DESC is a member of the Southeastern Electric Exchange (SEE),  
8 which is a trade association of approximately 55 individual investor-owned  
9 utilities. Each year we submit our SAIDI number for comparison against  
10 the other SEE companies, and DESC is consistently in the top quartile with  
11 regards to SAIDI of all responding utilities.

12 Exhibit No. \_\_ (RAG-1) demonstrates that in 2020, the SAIDI score  
13 of 74.75 for Mr. Hochgraf's circuit was better (i.e., lower) than the SAIDI  
14 score for the Low Country District and the DESC system as a whole. As  
15 such, Mr. Hochgraf is simply incorrect and without any basis to say that  
16 DESC's service to his residence is not reliable.

1   **Q.   ARE YOU AWARE OF A “WIDESPREAD” ISSUE OF REPEATED**  
2       **OCCURRENCES OF MULTIPLE BREAKERS TRIPPING**  
3       **SIMULTANEOUSLY DURING POWER OUTAGES IN THE**  
4       **CRESSWIND COMMUNITY?**

5   **A.**       No. Other than the unsubstantiated statements from Mr. Hochgraf,  
6       I am not aware of a widespread issue of repeated occurrences of multiple  
7       breakers tripping simultaneously during power outages in the Cresswind  
8       community.

9       I have personally communicated with only one other resident of the  
10      Cresswind community regarding an outage. My service truck responded to  
11      an outage call. The service truck confirmed that the voltage was adequate,  
12      but discovered that a single breaker had tripped. The customer reset her  
13      breaker. As a follow up, I visited the customer's residence and met with her  
14      to discuss the tripped breaker. I again checked voltage as well as  
15      connections and ground resistance and did not find anything from our  
16      facilities that would have contributed to the breaker tripping. I have not  
17      heard from the customer again.

1   **Q.    IN YOUR COMMUNICATIONS WITH MR. HOCHGRAF, DID YOU**  
2       **AT ANY TIME INDICATE TO HIM THAT THE TRIPPING OF HIS**  
3       **BREAKERS DURING A POWER OUTAGE WAS “NOT NORMAL” OR**  
4       **“UNIQUE” TO THE CRESSWIND COMMUNITY?**

5    A.       No. It is perfectly normal for a breaker to trip during an outage, and  
6       a breaker tripping during an outage is not unique to the Cresswind  
7       community.

8           What I initially referred to as “odd” or possibly “unique” was Mr.  
9       Hochgraf’s description of the randomness of the manner in which his  
10      breakers were tripping, i.e., different breakers reportedly tripping from one  
11      event to the next. However, during our visit to his residence in October  
12      2020, Ms. Eads explained in detail why such operation of AFCI/GFCI  
13      breakers was not so uncommon.

14  
15   **Q.    HAVE YOU RESPONDED TO COMMUNICATIONS FROM MR.**  
16       **HOCHGRAF SINCE APRIL 6, 2021?**

17   A.       No. The Company has already explained to Mr. Hochgraf that its  
18      system is operating normally and reliably. The Company has exhausted its  
19      efforts in this matter. If there was more the Company could do to resolve  
20      the issues that Mr. Hochgraf is experiencing in his residence, it would. But  
21      there is nothing left for the Company to do. Mr. Hochgraf will need to work  
22      with an electrician and/or the manufacturer of the AFCI/GFCI breakers to



1 resolve these issues with AFCI/GFCI breakers that have been installed in  
2 his home.

3

4 **Q. IS THE COMPANY RESPONSIBLE FOR CORRECTING OR**  
5 **RESOLVING ANY ISSUES THAT MR. HOCHGRAF EXPERIENCES**  
6 **WITH CIRCUIT BREAKERS INSTALLED DOWNSTREAM OF**  
7 **DESC'S POINT OF SERVICE?**

8 A. No. DESC is not responsible for the issues related to the operation  
9 of the circuit breakers in Mr. Hochgraf's residence, which were installed by  
10 a third party and are located downstream of the point at which DESC  
11 provides its service. Paragraph V.A. of the Company's Commission-  
12 approved General Terms & Conditions for Electric Service provide as  
13 follows:

14 The Company shall not be in any way responsible or liable for  
15 damages to or injuries sustained by the Customer or others, or by the  
16 equipment of the Customer or others by reason of the condition or  
17 character of Customer's wiring and equipment, or the wiring and  
18 equipment of others on the Customer's premises. The Company will  
19 not be responsible for the use; care or handling of electricity delivered  
20 to the Customer after it passes the service point. The Customer  
21 assumes responsibility and liability for damages and injuries caused  
22 by failures or malfunctions of Customer's equipment.  
23

24 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

25 A. Yes.



### System wide Reliability Calculations for Dominion Energy South Carolina

Year	SAIDI	SAIFI	CAIDI	MAIFI
<b>2020</b>	88.23	1.17	75.41	3.36
<b>2019</b>	77.89	1.03	75.68	3.49
<b>2018</b>	96.16	1.37	69.97	3.82
<b>2017</b>	81.8	1.14	72.01	3.78

*\*\*Major Event Day (MED) Adjusted Values*

#### LOW COUNTRY DISTRICT

Year	SAIDI	SAIFI	CAIDI	MAIFI
<b>2020</b>	84.1	1.2	67.4	3.6
<b>2019</b>	65.4	0.9	70.9	3.9
<b>2018</b>	107.5	1.4	76.7	3.8
<b>2017</b>	60.4	0.9	67.5	4.1

#### Pine Hill Substation, Circuit 70632

Year	SAIDI	SAIFI	CAIDI	MAIFI
<b>2020</b>	74.75	2.89	25.86	7.90
<b>2019</b>	85.75	2.94	29.18	14.33
<b>2018</b>	160.67	2.50	64.15	11.99
<b>2017</b>	23.86	0.12	197.03	3.00

**SAIDI** System Average Interruption Duration Index = Average sustained outage duration (minutes) per system customer or district customer.

**SAIFI** System Average Interruption Frequency Index = Average number of sustained outage interruptions per system customer or district customer.

**MAIFI** Momentary Average Interruption Frequency Index = Average number of momentary interruptions per system customer or district customer.

**CAIDI** Customer Average Interruption Duration Index = Average sustained duration (minutes) of customers experiencing a sustained outage.

**BEFORE**  
**THE PUBLIC SERVICE COMMISSION OF**  
**SOUTH CAROLINA**  
**DOCKET NO. 2021-165-E**

**IN RE:**

Michael Hochgraf,

Complainant/Petitioner,

v.

Dominion Energy South Carolina, Inc.


Defendant/Respondent.

**VERIFICATION**

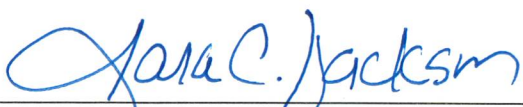
I, Richard A. Gilbert, II, first being duly sworn, depose and say that:

1. I am employed by Dominion Energy South Carolina, Inc. as the Manager of Electric Distribution Operations & Construction for the Summerville District.
2. I have prepared or caused to be prepared under my supervision direct testimony and one exhibit, which were pre-filed with the Public Service Commission of South Carolina in Docket No. 2021-165-E on June 14, 2021.
3. I have read said pre-filed direct testimony and reviewed the exhibit and know the contents thereof, and the contents of said pre-filed direct testimony and exhibit are true.

FURTHER AFFIANT SAYETH NOT.

  
Richard A. Gilbert, II

Sworn to and subscribed before me  
this 8th day of June, 2021

  
Notary Public for South Carolina  
My Commission Expires: 3/11/27  
SARA C. JACKSON



**BEFORE**  
**THE PUBLIC SERVICE COMMISSION OF**  
**SOUTH CAROLINA**  
**DOCKET NO. 2021-165-E**

**IN RE:**

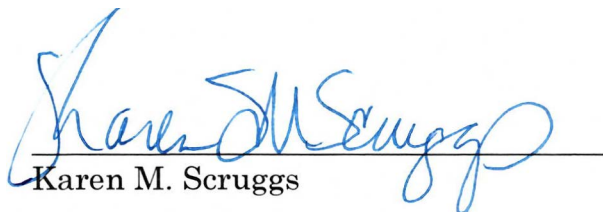
Michael Hochgraf, )  
 )  
Complainant/Petitioner, )  
 )  
v. )  
 )  
Dominion Energy South Carolina, Inc., )  
 )  
Defendant/Respondent. )  
\_\_\_\_\_ )

**CERTIFICATE OF  
SERVICE**

This is to certify that I have caused to be served this day copies of **Dominion Energy South Carolina, Inc.'s Direct Testimony, Exhibits and Verifications of Kimberly Eads and Richard Gilbert** to the persons named below at the addresses set forth via U.S. First Class Mail and electronic mail:

Mr. Michael Hochgraf  
3144 Cross Vine Lane  
Summerville, SC 29483  
[mikehoch@icloud.com](mailto:mikehoch@icloud.com)

Alexander W. Knowles, Esquire  
South Carolina Office of Regulatory Staff  
1401 Main Street, Suite 900  
Columbia, SC 29201  
[aknowles@ors.sc.gov](mailto:aknowles@ors.sc.gov)

  
Karen M. Scruggs

Columbia, South Carolina  
This 14th day of June, 2021